

REMARKS

The Applicant thanks the Examiner and his primary Examiner, Vuthe Siek, for the courtesy that they extended during the telephonic interview conducted on April 7, 2004 with Applicant's attorney. As agreed during the interview, the Applicant hereby amends independent claims 1, 5, 17, and 23 to clarify that the recipe for an instrument is configured before a wafer is generated. Claims 2, 3, and 7 have been amended to remain consistent with amended independent claims and not for reasons related to patentability. The applicant submits that as the Examiner indicated in the telephonic interview, claims 1, 5, 17, and 23 as amended overcome the prior art of record. The Applicant hereby cancels claims 24-31 without prejudice or disclaimer in order to place the application in condition for allowance.

The instant response and amendment summarizes the position expressed by the Applicant during the interview.

Claims 1-31 are pending and stand rejected. The Examiner rejected claims 1-31 under 35 U.S.C. § 103(a) as being unpatentable over Hasan (U.S. Publication No. 2002/0165636) in view of Ozaki (U.S. Patent No. 5,904,300).

Claim 1, as amended, recites:

For an instrument responsive to recipe parameters, a method for creating a recipe, the method comprising:
accessing mask set data;
recognizing a target structure in the mask set data;
extracting parameters from the mask set data; and
configuring the recipe based on the extracted parameters responsive to the recognized target structure, **wherein the configuring of the recipe is performed before a wafer printed with a mask created from the mask set data is generated.**

(Emphasis added). Applicant's claimed invention, as recited in claim 1, is directed to a technique that uses information from the mask data to generate a recipe for inspection/metrology

systems to inspect or measure a semiconductor wafer. Claim 5 similarly recites “configuring the recipe ... before a wafer ... is generated.” Amended claims 17 and 23 recite a system and an instrument adapted to perform similar steps recited in claims 1 and 5. The information present in the mask data is, in many cases, sufficient to find target sites, alignment sites, and to determine the other parameters necessary to generate a recipe. An advantage of the claimed invention in that it does not require that a wafer become available for use in creating a recipe. This technique is beneficial because it avoids the problem of having to wait for a wafer to become available for a given device, layout, and process level. Waiting for a wafer means that a first measurement or inspection cannot be performed until later in the manufacturing process when the wafer becomes available.

As was admitted by the Examiner, Hasan does not disclose or suggest “configuring the recipe based on the extracted parameters responsive to the recognized target structure, **wherein the configuring of the recipe is performed before a wafer printed with a mask created from the mask set data is generated,**” as recited in independent claims 1 (emphasis added). Claims 5, 17, and 23 similarly recite that the recipe is configured before a wafer is generated.

Ozaki fails to remedy the deficiency of Hasan. In contrast to the claimed invention, Ozaki discloses a technique that requires that a wafer become available for a given device type and layout to generate a recipe. Ozaki does not perform inspection of the structure until a monitor wafer is available (see col. 5, line 34 through col. 6, line 50 of Ozaki).

Since neither reference discloses or suggests that “the configuring of the recipe is performed before a wafer ... is generated,” it follows that the combination of the references cannot disclose or suggest the claimed feature.

For at least the reasons discussed above, independent claims 1, 5, 17, and 23 patentably distinguish over the cited references. Dependent claims 2-4, 6-16, and 18-22 variously depend

from claims 1, 5, 17, and 23 and are patentably distinct for at least the reasons cited above in connection with the independent claims.

Conclusion

In sum, Applicant respectfully submits that claims 1-23, as presented herein, are patentably distinguishable over the cited reference (including references cited, but not applied). Therefore, Applicant requests reconsideration and allowance of these claims.

RESPECTFULLY SUBMITTED,
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